

cl This application is a continuation of Application No. 08/933,886 filed September 19, 1997, now U.S. Patent No. 6,013,372, which is a continuation-in-part of International Application No. PCT/JP96/00733 filed March 21, 1996 and which designated the United States.

IN THE CLAIMS

Please amend the claims as follows:

301. (amended) A method of preventing or reducing fogging of a surface of a composite when subjected to humid conditions, comprising:

providing a composite with a surface, said composite comprising a substrate and a photocatalytic surface layer, said photocatalytic surface layer comprising a photocatalyst;

subjecting the photocatalyst to photoexcitation to render the surface of the composite hydrophilic, wherein, after said photoexcitation, the surface of the composite has a water wettability of less than 10° in terms of the contact angle with water; and

subjecting the composite to humidity.

303. (amended) The method of claim 301, wherein, after said photoexcitation,

the surface of the composite has a water wettability of less than 5° in terms of the contact angle with water.

304. (amended) The method of claim 301, wherein, after said photoexcitation, the surface of the composite has a water wettability of about 0° in terms of the contact angle with water.

305. (amended) The method of claim 301, wherein said photocatalyst is selected from the group consisting of TiO₂, ZnO, SnO₂, Sr TiO₃, WO₃, Bi₂O₃ and Fe₂O₃.

308. (amended) The method of claim 301, wherein said composite further comprises a protective coating over the photocatalytic surface layer.

309. (amended) The method of claim 301, wherein said substrate comprises

glass.

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310. (amended) The method of claim 301, wherein, said substrate comprises glass containing alkaline network modifier ions, and wherein said composite further comprises a film disposed between said substrate and said photocatalytic surface layer, said film preventing ions from diffusing from said substrate into said photocatalytic surface layer.

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312. (amended) A method for maintaining a surface of a composite in a clean state when subjected to deposits and contaminants in air and environmental precipitation, comprising:

providing a composite with a surface, said composite comprising a substrate and a photocatalytic surface layer, said photocatalytic surface layer comprising a photocatalyst;

subjecting the photocatalyst to photoexcitation to render the surface of the composite hydrophilic, wherein, after said photoexcitation, the surface of the composite has a water wettability of less than about 20° in terms of the contact angle with water;

and

contacting the surface of the composite with water.

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314. (amended) The method of claim 312, wherein, after said photoexcitation, the surface of the composite has a water wettability of less than 10° in terms of the contact angle with water.

315. (amended) The method of claim 312, wherein, after said photoexcitation, the surface of the composite has a water wettability of less than 5° in terms of the contact angle with water.

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316. (amended) The method of claim 312, wherein, after said photoexcitation, the surface of the composite has a water wettability of about 0° in terms of the contact angle with water.

317. (amended) The method of claim 312, wherein said photocatalyst is selected from the group consisting of TiO_2 , ZnO , SnO_2 , Sr TiO_3 , WO_3 , Bi_2O_3 and Fe_2O_3 .

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320. (amended) The method of claim 312, wherein said composite further comprises a protective coating over the photocatalytic surface layer.

321. (amended) The method of claim 312, wherein said substrate comprises glass containing alkaline network modifier ions, and wherein said composite further comprises a film disposed between said substrate and said photocatalytic surface layer, said film preventing ions from diffusing from said substrate and photocatalytic surface layer.

322. (amended) The method of claim 312, wherein said substrate is a tile, a portion of the body of a motor vehicle, an inner panel of a building, or an outer panel of a building.

Please cancel claims 302 and 313.

Please add the following claims:

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324. (new) The method of claim 301, wherein said photocatalytic surface layer further comprises silica or silicone.

325. (new) The method of claim 301, wherein said photocatalytic surface layer consists essentially of said photocatalyst.

326. (new) The method of claim 310, wherein said film comprises silica.

327. (new) The method of claim 312, wherein said photocatalytic surface layer further comprises silica.